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ABSTRACT

A survey of 8,793 Houston area students examined student performance of personal business functions required of most adults in our economically-oriented society: legal skills, recordkeeping skills, buying skills, and management skills. The Basic Business Survival Skills Survey, fifty true-false questions in the four general areas, was administered to students from twenty-seven high schools (grades 9-12) and one community college. Between 67% and 92% of the high school students and 46% of the junior college students failed to answer at least 65% of the questions correctly. Median scores of students who had completed two or more business courses were approximately the same as for those who had not taken any business courses. Analysis by grade level showed little deviation among grades 9, 10, and 11 on buying skills, followed by recordkeeping, legal, and management skill scores the lowest. Three significant factors emerged in every school: (1) the majority of high school students are significantly deficient in basic business survival skills, (2) the majority are not being enrolled in business courses that include all four areas of basic business survival skills, and (3) the traditional business program does not seem to adequately prepare students in personal business skills. (Questionnaire and data are appended.) (JT)

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THE ALPHA GAMMA STUDY

A REPORT ON THE

BASIC BUSINESS SURVIVAL SKILLS SURVEY

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Director of the Study
January, 1980

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PREFACE

The Alpha Gamma Study was conducted as a research project of the Alpha Gamma University of Houston Chapter of Delta Pi Epsilon, the national graduate fraternity for business education. The study was made in response to an invitation extended by the Alpha Mu University of New York Chapter at the 1977 Delta Pi Epsilon National Research Conference in Oklahoma City.

Alpha Gamma Chapter wishes to express appreciation to Alpha Mu Chapter not only for their permission to replicate the Basic Business Survival Skills Study but also for their invaluable assistance and encouragement during this project. Special thanks and appreciation go to Dr. Eugene P. Whitney, director of the Alpha Mu study, as well as all those other business educators who have contributed to the success of this growing national project.

The Alpha Gamma Research Committee wishes to dedicate this work to Dr. W. Arthur Allee, recently retired sponsor of the Chapter, for providing the inspiration and leadership necessary to complete a project of this size. The Research Committee consisted of the following members:

Dr. Margaret Casey Reap, Director of the Study; Director of Research and Education Development, North Harris County College.

Dr. W. Arthur Allee, Professor Curriculum and Instruction, University of Houston.

Ms. Donna Badger, Business Teacher, Jersey Village High School.

Mr. Gerald Beckham, Director of Business Education, Houston Independent School District.

Ms. Frances Higginbotham, Business Teacher, Brazosport College.

Dr. Charles Norton, Chairman of Business and Vocational Occupations, Wharton County Junior College.

Dr. Don Scalamogna, Business Teacher at University of Houston.

Dr. Nora Jo Sherman, Business Teacher at Houston Community College.

The list of all those other educators participating in the study is too long to include here. The scholarly efforts of all these people have contributed greatly to the success of the project and their work is greatly appreciated. Special recognition must be extended to Mr. Ken Thompson of ScanTron Corporation for his help in designing the survey form and in keeping the scoring machines in operating condition.

THE ALPHA GAMMA STUDY

SURVEY OF BASIC BUSINESS SURVIVAL SKILLS

During the last week of February, 1979, teachers all over the Greater Metropolitan Houston, Texas, area administered the Survey of Basic Business Survival Skills to 8793 students. Of these 8793 students, 8668 were high school students and 125 were community college students.

PURPOSE OF THE STUDY

The study was conducted to assist local schools in assessing their personal business instructional program. The items on the survey attempt to test student performance of the personal business functions that are required of most adults to adequately survive in our economically-oriented society. The survey is divided into four categories: legal skills, recordkeeping skills, buying skills, and management skills.

Answers to these specific questions were sought by the study:

1. Are students leaving school with sufficient basic business skills to adequately manage their personal business affairs?
2. What role is the business education department playing to provide all students with the basic business survival skills necessary for one to adequately manage his/her personal business affairs?

PROCEDURES

The first step in the Alpha Gamma study was to examine the instrument developed by Alpha Mu. The Alpha Gamma Research Committee compared the instrument with other survey instruments available and with state and association guidelines for personal business knowledges and competencies. The

validation procedures used by Alpha Mu to develop the instrument are described in the following section entitled "The Survey Instrument."

The second step in the study was to secure schools to be surveyed. Details relating to the samples selected are described in the subsequent section called, "The Population Surveyed."

The third step was to administer the survey and to analyze the results. Instructions for administering and scoring the tests were prepared, reviewed by pilot study, and improved. Tests were answered on machine-scorable forms for ease in marking. Information about business courses which included personal business skills that students had completed was collected on the answer form. Those business courses were: Business Law, Accounting, Recordkeeping, Bookkeeping, Business Math, General Business, Economics, Consumer Economics, Business Management, and Free Enterprise.

The fourth step was to arrange for the dissemination of the information collected by the survey.

LIMITATIONS OF THE SURVEY

The study was limited to the personal business skills identified on the survey instrument. There was no claim that the instrument reflected all of the business skills that everyone should possess. However, it was felt that the instrument reflected a reasonable assessment of a substantial share of the more common skills.

Students were surveyed during business education classes. No claim is made here that this group is representative of the general student population in the Houston area. Students, however, did represent a substantial percentage of the enrollment of those schools surveyed.

THE SURVEY INSTRUMENT

The survey instrument was developed by Alpha Mu through a process involving textbook and syllabi study followed by review from panels of business teachers, state supervisors, housewives and business teachers.[1] Eight schools in New York state had used the instrument for a total of 1061 high school seniors. Schools in four other states had also used a revised instrument for a total of 449 students. Findings had been consistent from the five states surveyed.

The instrument consisted of 50 true-false questions in four general areas. There were 20 questions in legal skills, 10 questions in recordkeeping skills, 10 in buying skills, and 10 in management skills. A score of 65 percent was considered the minimal passing mark. A copy of the instrument is attached in Appendix A.

The decision to use true-false questions (the Alpha Mu committee originally chose multiple-choice) was based on the time-factor limitation that emerged as a major obstacle in securing school participation. A 45-minute period was the maximum acceptable time that would be considered by schools willing to participate in the study. A validation study revealed that 45 minutes was ample for administration and completion of the survey.

An item analysis was completed for three randomly selected schools that had participated in the Alpha Mu study. The results of this analysis are shown in Appendix B and have served as the basis for some minor adjustments in revising the survey instruments. The revised Basic Business Survival Skills Survey was used in the Alpha Gamma study.

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[1]Eugene P. Whitney, The Alpha Mu Study, A Report on the Basic Business Survival Skills (Albany: Alpha Mu, Delta Pi Epsilon, State University of New York, 1978).

A training session for teachers administering the survey done under Alpha Gamma auspices was held one month prior to its administration. The survey instrument was discussed in detail and the written directions to teachers administering the test were reviewed and improved. Each teacher attending the training session acted as coordinator of the survey in his/her own school. The instrument was administered during the last week of February, 1979. To assist in the collection of the data a special form, which could be machine scored, was designed by ScanTron Corporation and used in the survey.

THE POPULATION SURVEYED

A total of 8793 students were surveyed in the Greater Metropolitan Houston Area. These students were drawn from 27 high schools and 1 community college.

The 8668 high school students surveyed were all drawn from schools within the Greater Metroplitan Area. As would be expected, the schools surveyed included a mix of suburban and inner-city schools. Of the high school students surveyed, 247 were in grade 9, 3028 were in grade 10, 2473 were in grade 11, 2796 were in grade 12, and 124 did not report grade level.

Total enrollment statistics were available from 26 of the 27 high schools and from the community college. The 8558 students from 26 high schools represented 21 percent of the total enrollment of those 26 schools of 40,016. The 125 community college students represented three percent of the total enrollment of one community college of 4259. Data relating to the students surveyed is shown in Tables 1 and 2, Appendix C.

Students were surveyed during business education classes. Students not included were not available on the day of the survey. No student was surveyed more than once.

Again, no claim is made that the population surveyed is a statistically valid sample of the general student population in the Houston area. However, it was felt in view of the large sample size, the fact that most Houston high school students take a business education course (particularly typing), and the consistency of the Alpha Gamma finding in relation to the Alpha Mu findings, that the sample might be a reasonable representative sample of students in the Houston area.

FINDINGS

Statistical tables are presented in Appendix C. The following narrative attempts to give an objective accounting of the results of the survey.

Between 67 percent and 92 percent of the high school students surveyed failed to answer at least 65 percent of the questions correctly. Of the community college students, 46 percent failed to answer at least 65 percent of the questions correctly. (See Table 3.)

Median scores on the total survey ranged from 54 to 62 percent in the high school level. A median score of 66 percent was obtained at the community college level. (See Table 4.)

The median scores of students who had completed two or more business courses were higher than the scores of those who had not completed any in 20 of the 28 schools. In 16 of the 20, however, median scores for those with the business training was only two to five percentage points higher than for those students with no business training. Median scores in 8 of the 28 schools were actually lower for those who had business training than for those who did not. (See Table 4.)

An analysis of scores by grade level showed little deviation among grades 9, 10, and 11; but some improvement for grades 12 and the community college.

The median scores for grade 9 ranged from 51-58; for grade 10 from 51-60; for grade 11 from 50-64; for grade 12 from 55-64; and 66 for the community college. (See Table 5.)

Scores were further analyzed by scores on the four parts of the survey. With almost 100 percent uniformity, median scores were highest on buying skills, followed by recordkeeping skills, legal skills, and management skills scores the lowest. (See Table 6.)

In the legal skills area, students with two or more business training courses scored slightly higher than students with no business courses in 18 of the 28 schools. Median scores on legal skills ranged from 45-57 with 55 the mode. For students with no business training, 54 was the mode, students with two or more business courses scored a mode of only two percentage points more. Students who had taken business law showed a slight edge over those who had not. (See Table 7.)

In the recordkeeping skills area, students with two or more business training courses scored slightly higher than students with no business courses in 20 of the 28 schools. Median scores on recordkeeping skills ranged from 53-73 with 59 the mode. For students with no business training, 59 was the mode. Students with two or more business courses, however, scored a lower mode of 57. Students who had taken specific courses in recordkeeping, bookkeeping, or accounting did not show a significant advantage over students without this training. (See Table 8.)

In the buying skills area, students with two or more business training courses scored slightly higher than students with no business courses in 20 of the 28 schools. Median score on buying skills ranged from 60-81, with bi-modal scores of 67 and 76. For students with no business training, 65 was the mode as compared with bi-modal median scores of 63 and 78 for those

students with two or more business courses. Taking a consumer education or general business course offered no improvement in scores. (See Table 9.)

In the management skills area, students with two or more business training courses scored slightly higher than students with no business courses in 19 of the 28 schools. Median scores on management skills ranged from 40-67, with bi-modal scores of 50 and 54. For students with no business courses, 55 was the mode. For students with two or more business courses, bi-modal scores of 50 and 60 were achieved. Taking consumer education offered no advantage in score, but a very slight advantage was shown by students who had both bookkeeping and business law courses. (See Table 10.)

The committee is very much aware of the limitations of research in general and the temptation for researchers to over conclude. Every attempt has been made to keep this limitation of the study in proper perspective. The discussion presented below offers "possible interpretations" of the data collected. Educators are encouraged to examine and analyze this data along with other related research to form their own conclusions concerning the issues involved.

DISCUSSION

The percentage of students (78 percent) scoring below 65 percent on the survey is high in the Greater Metropolitan Houston, Texas, Area but comparable with scores of other schools surveyed in five other states in the nation. Using 65 percent as a minimal passing grade on the survey, between 67 and 92 percent of the students in each high school and 46 percent in the one community college surveyed across the nation failed to show minimal competency in the basic business survival skills identified. This indication of major

deficiency was consistently confirmed in every school surveyed in the study regardless of geographic location.

Three significant factors have emerged in every school: (1) the majority of high school students are significantly deficient (scores below 65 percent) in the basic business survival skills; (2) the majority of high school students are not being enrolled in the business courses that include all four areas of basic business survival skills; and (3) the traditional business program does not seem to adequately prepare students in personal business skills.

Business education programs have traditionally had vocational training for employment and personal business skills as dual objectives. In reviewing the scores of students on the survey, students who had taken two or more business courses had approximately the same median scores as those who had not taken any business courses.

Some reasons for this phenomena have been offered. The majority of the business education enrollments are in the courses which are designed to prepare students for entry-level employment in business. In these courses basic business for personal use would obviously not be a primary objective. The skills needed to meet the requirements to secure and maintain a job in business may not be synonymous with the total skills necessary to manage one's personal business affairs. Another reason suggested is that students enrolled in the business program are generally thought less academically able than those in the college entrance program.

Another possible conclusion might be that basic business skills for personal use are not taught in the typical business education courses. The general business course seems to include too much of what is not basic while the consumer education course has frequently developed a stigma that is not

acceptable for "college entrance" students. The typical high school bookkeeping course has been under fire by critics for many years.

The answer to question 1 in the purpose of the study, "Are students leaving school with sufficient basic business skills to adequately manage their personal business affairs?" appears to be, NO!

The answer to question 2, "What role is the business education department playing to provide all students with the basic business survival skills necessary for one to adequately manage his/her personal business affairs?" appears to be, A VERY LIMITED ROLE!

Based on the limited study completed, it would appear that there may be a major challenge to business educators to prepare students to manage their personal business affairs. This personal business skill objective obviously is not being met by the regular business education program.

The results of the Alpha Gamma study and the Alpha Mu study point to the need for restructuring the business education curriculum. Courses that overlap, repeat, or overlook needed business awareness and skills need to be replaced by an integrated business curriculum that includes vocational skills and personal business skills organized in a rational, efficient manner.

FUTURE PLANS

The study was conducted in response to an invitation by Alpha Mu Chapter of Delta Pi Epsilon to add to the growing base of national data on personal business skills preparation. The findings of the study will be a major addition to that data base. The local findings will be distributed to each of the 28 schools involved in the study.

The study also leads to the conclusion that expanded research is in order to confirm or to refute the findings presented in this report. A future

service project of Alpha Gamma Chapter is to encourage this expansion through dissemination of the findings through seminars, workshops, and publications.

APPENDIX A

THE SURVEY INSTRUMENT

BASIC BUSINESS SURVIVAL SKILLS SURVEY

Directions:

Do not write on this paper! Put all of your answers on the ANSWER SHEET by marking T if the statement is true, and F if the statement is false. Be sure to put your name on the ANSWER SHEET and to CHECK those courses that you have already taken!

TO STUDENTS: The questions on this survey test some of the understandings of basic business that you will be required to know when conducting your own personal business affairs. DON'T MAKE WILD GUESSES! Answer only those questions that you feel reasonably sure of answering correctly.

PART I

1. If a store that you have done business with sends you a bill for more than you feel you owe, you are legally liable for payment of the entire bill unless you prove that the store has made an error.

2. If you sign a bank note for a friend as an "accommodation party," and the friend cannot pay the note when it comes due, you are legally obligated to pay the bank the full amount of the note.

3. If you receive a magazine in the mail which you have not ordered, you are legally required to pay for the magazine or send it back.

4. If you orally agree to purchase a $2000 automobile in front of three witnesses, you can legally back out of the agreement on the grounds that you did not sign the agreement.

5. If you buy a lawn mower from your neighbor on an "as is" basis and you later discover that your neighbor did not legally own the lawn mower, you can legally return the mower to your neighbor and demand your money back!

6. You purchased a refrigerator from a store relying on the salesman's statement that "our written guarantee covers all labor and parts for one year but this refrigerator will give you trouble free service for at least ten years." After 18 months of use, the motor burned out. You cannot get any legal assistance from the courts to force the store to make good on the salesman's promise.

7. You endorsed your personal check made out to Cash with a restrictive endorsement, "pay to the order of John Jones," and John Jones lost the check. Peter Smith found the check, endorsed it - "John Jones," and cashed it at the bank. You can legally force the bank to refund the money taken out of your account to cover this check if you notify the bank within 30 days.

8. You have liability, collision, and comprehensive insurance on your automobile. You suffered extensive damage to your auto when you crashed into a tree while driving fifteen miles an hour over the legal speed limit. The insurance company can legally refuse to pay you any money to have your auto repaired.

. You purchased a TV set under a Conditional Sales Contract whereby you paid 10% down and 10% a month for nine months. You will not have legal title to the set until after you have made the final payment.

0. Your neighbor purchased a bicycle from a store on a 30-day charge account and sold it to you for cash twenty days later. You have full legal title to the bike even if your neighbor does not pay the store for the bicycle at the end of the 30 days.

1. You let your neighbor borrow your car to take his sick mother to the hospital. On the way back from the hospital he had a "drag race" with a friend in which he was forced off the road and into a tree. You can legally sue your neighbor for the damages done to your car.

2. You agreed to take care of your neighbor's pet cat as a favor while she went on a vacation. When you were out shopping, fire broke out in your home and killed both your neighbor's cat and your own cat. Your neighbor threatens to bring a law suit against you if you do not purchase another cat from the pet shop to replace the one that was killed. You have no legal obligation to reimburse your neighbor for the loss of her cat.

3. You rented a house on a month-to-month basis without a written lease agreement. Later you had a fireplace installed in the house at considerable expense to you after which your landlord decided to evict you and live in the house himself. You became angry and defaced the fireplace before you left. Your landlord can legally force you to pay to have the fireplace repaired.

4. You purchased a part for your automobile with terms FOB Shipping Point, 3/10/N/30. The part became damaged in transit and you refused to accept delivery from the trucking company. The factory can legally force you to pay the full price for the part if you do not pay within thirty days.

5. You were driven home from a fraternity party and were obviously intoxicated. Your friends left you off across town several miles from your home. You had money for bus fare but the driver refused to let you aboard the bus. The driver had no legal right to refuse to let you on the bus, and you have a legal right to sue the bus company.

6. You make a bet on the races in front of two witnesses, both of legal age. You lost the bet, but you refused to pay. You are under no legal obligation to pay the bet.

7. You purchased a transistor radio under a 30-day unconditional guarantee and paid for the radio with your Master Charge Account. The radio stopped working the next day and the store refused to honor its guarantee. You can legally refuse to pay the Master Charge Account when you receive the statement from the bank at the end of the month.

8. You rented a motorcycle from Mertz Rent-a-Cycle and had a flat tire. You were several miles from a service station and, consequently, drove on the flat until you got to the first place you could get it fixed. The tire was ruined. You are legally obligated to pay Mertz Rent-a-Cycle the full price of replacing the tire.

9. You purchased a can of fish from the grocery store and when you opened it at home you discovered that the fish had started to spoil. You can legally return the can to the store and demand your money back.

20. You purchased a lockset at the hardware store to fit your front door which you accurately described to the salesman. When you got home, the lockset did not fit. You can return the lockset and legally demand your money back.

PART II

1. You received your bank statement which stated that the ending balance in your checking account was $258.00. The check stub balance that you keep showed a blance of $158.00. It is reasonable to assume that you could write out a check for $200.00 without fear of receiving a call from the bank that your account was overdrawn.

2. You added your cancelled checks at the end of the year and determined that you spent $1800 for Rent, $485 for Interest on a Bank Loan, $500 for Clothes, $100 for Theatre Tickets, and gave $115 to Charity. You can list only $600 of these expenses as a deduction on your federal income tax return.

3. You made purchases on your charge account during the month of $6.98, $4.59, $3.17, $16.32, and $9.73. The bill from the store at the end of the month stated that you owed $40.79. You must pay $40.79 to settle your account.

4. Your electric bill for the month was $38.70. If you used 387 kilowatts, the rate charged is $1.00 per 10 kilowatts.

Base your answers to questions #5 through #7 on the telephone bill shown below:

	State-Local Tax	Federal Tax	Charges Excluding Taxes
1 Monthly Charge for Service--Message Unit Allowance	.75	.64	10.70
2 Additional Message Units			
3 Directory Assistance and Tolls (see Statement)	.26	3.10	51.74
4 Other Charges or Credits (explanation enclosed)			
5 Representation in Directory (explanation enclosed)			
6 Total of Current Charges Excluding Taxes			62.44
7 Taxes	1.01	3.74	5.75
8 Total of Current Charges Including Taxes			68.19
9 Balance from Last Bill (please disregard this amount if paid)			
If you have a question or complaint, call our Business Office at (518) 456-9951		TOTAL	68.19

Thank you. Payment for Current Charges (line 8) is due by JUN 25

5. The Company has made an obvious error and you have been overcharged!

6. The total cost for Directory Assistance and Tolls for the month is $51.74..

7. The total federal tax on this bill is $3.74.

Base your answers to questions #8 through #10 on the following attachment to your paycheck:

THIS IS NOT A CHECK

STATE OF NEW YORK

No. 02196162
B-02196162

15	03 31 77	110 14 2909	6282 64	896 98	325 43
code	per. ending	soc.sec.no.	ytd gross salary	ytd fed.tax	ytd.state tax
367 50			23464 00		897 52
ytd. soc.sec.tax			base pay		gross pay

25 00	6	M	128 14	6	46 49
retire.loan	fed.ex.	status	federal tax	state ex.	state tax
52 50					
soc.sec.tax					NET PAY 623 65

8. Your "take home pay" is $623.65.

9. The total amount of Social Security Taxes withheld from your pay during the year is $367.50

10. The total amount of income taxes withheld from this paycheck is $174.63.

PART III

1. The date stamped on a loaf of bread tells you when the bread was baked.

2. It is more economical to purchase a 13 oz. jar of jam for $.75 than it is to purchase two 6 oz. jars at $.36 each.

3. People who buy in the smallest units usually pay more than those who buy in larger units.

4. Price may not be the most important consideration in buying, even when buying the same product or brand of product.

5. Style goods sell at their highest prices at the end of the season.

6. A brand name or trademark is a guarantee backed by the government that the product is top quality.

7. When grade standards are included on the label of a product, the consumer need only know that No. 1 is the best and that quality decreases as the number increases.

8. Nearly all retail stores have special sales during which prices are lower than at any other time.

9. In almost every community, a yearly sales pattern is followed by most stores in which prices of particular commodities are at their lowest level at certain times of the year.

0. Bargains can be found and money saved by waiting for sales.

PART IV

1. You have a charge account on which you have to pay 1½% monthly on the unpaid balance. If you have an outstanding balance of $300 that you will not be able to pay for three months, it would be less costly to borrow the money from a bank and pay the charge account.

2. If you purchase a ten year endowment insurance policy, you will get the benefit of insurance protection during the life of the policy and a cash payment at the end of ten years if the insured is still alive.

3. Private Corporate Bonds are a safer investment than Corporate Stocks from the same company.

4. Municipal Bonds will sometimes give a higher rate of return than will United States Government Bonds.

5. Any stock selling below its "par value" is a good investment.

6. One can gain "income tax benefits" by owning a home rather than renting one.

7. Credit can be used to improve one's level of living.

8. You would generally pay a lesser rate of interest on long-term credit than you would on short-term credit.

9. It is possible for one to obtain short-term credit without paying interest costs by using a "charge account."

10. One who pays cash for all purchases generally establishes a maximum line of credit.

(End of Survey - RETURN BOTH ANSWER SHEET AND TEST PAPER TO EXAMINER)

APPENDIX B

VALIDATION STUDY / ITEM ANALYSIS

The following table presents the percentage of correct answers for each item on the survey questionnaire for three sample schools; the percentage of correct answers for each item for the combined total of the three samples; and the percentage of correct answers for each item as recorded for the control group of business teachers.

ITEM ANALYSIS - PERCENT CORRECT

Question No.	Sample 1	Sample 2	Sample 3	Combined	Control
1	14%	14%	5%	13%	77%
2	76	81	80	78	77
3	83	76	79	81	88
4	69	62	50	64	77
5	42	48	30	41	88
6	67	65	49	68	77
7	48	56	48	50	77
8	46	56	57	50	88
9	67	79	69	70	100
10	48	52	42	48	77
11	50	43	48	48	100
12	79	72	89	79	88
13	43	56	38	45	77
14	10	18	5	11	77
15	55	51	57	54	88
16	58	50	35	52	100
17	57	58	52	57	100
18	56	62	63	58	100
19	91	92	97	92	100
20	73	80	77	75	88
21	68	53	75	66	88
22	39	31	29	35	100
23	69	72	86	73	100
24	79	69	72	75	100
25	43	43	35	42	100
26	26	25	22	25	88
27	76	76	76	76	100
28	91	91	98	92	100
29	73	73	88	76	100
30	36	24	23	31	100
31	91	79	86	87	88
32	72	69	76	72	88
33	85	82	77	83	88
34	78	68	61	73	88
35	73	71	69	72	77
36	65	50	48	58	77
37	44	54	51	48	77
38	73	84	91	79	88
39	97	93	80	93	88
40	83	89	83	84	88
41	31	41	29	33	100
42	53	60	57	55	100
43	47	48	57	49	100
44	59	71	63	63	100
45	47	60	57	52	88
46	78	86	75	79	100
47	69	75	76	72	88
48	52	51	45	51	100
49	51	51	36	48	100
50	43	32	41	40	88

SAMPLE 1 - 223 Students
SAMPLE 2 - 91 Students
SAMPLE 3 - 68 Students
COMBINED- 382 Students
CONTROL - 9 Business Teachers

APPENDIX C

LIST OF TABLES

Table 1 - Data Relating to the Students Surveyed - Surveys by Total Enrollment

Table 2 - Data Relating to the Students Surveyed - Surveys by Grade Level

Table 3 - Students Failing Test

Table 4 - Median Scores on Total Survey Compared to Median Scores Grouped by Business Course Training

Table 5 - Median Scores by Grade Level

Table 6 - Median Scores on the Total Survey and in the Skills Area

Table 7 - Median Scores in the Legal Skills Area - Part I

Table 8 - Median Scores in the Recordkeeping Skills Area - Part II

Table 9 - Median Scores in the Buying Skills Area - Part III

Table 10 - Median Scores in the Management Skills Area - Part IV

TABLE 1

DATA RELATING TO THE STUDENTS SURVEYED

SURVEYS BY TOTAL ENROLLMENT

SCHOOL*	SCHOOL ENROLLMENT	COMPLETING SURVEY	PERCENT SURVEYED
1	2000	409	20.5%
2	2051	540	26.3%
3	406	51	13.0%
4	1121	216	19.0%
5	1110	193	17.4%
6	404	89	22.0%
7	332	60	18.1%
8	2531	674	26.6%
9	1419	390	27.5%
10	2017	412	20.0%
11	2197	439	20.0%
12	2146	394	18.0%
13	2051	326	15.9%
14	577	86	14.9%
15	1569	305	19.0%
16	1812	390	21.5%
17	1388	394	28.0%
18	1312	364	28.0%
19	2045	446	22.0%
20	1538	315	20.0%
21	2208	633	28.7%
22	1739	241	13.9%
23	2027	484	24.0%
24	1328	198	15.9%
25	1348	362	27.0%
26	1340	147	11.0%
SUB-TOTALS	40,016	8558	21.0%
27	NA	110	
28	4259	125	2.9%
TOTALS		8793	

*Schools were high schools except for school 28 which was a community college

TABLE 2

DATA RELATING TO THE STUDENTS SURVEYED
SURVEYS BY GRADE LEVEL

School	Grade 9		Grade 10		Grade 11		Grade 12	
	No. Surveyed	As % of Enrollment	No. Surveyed	As % of Enrollment	No. Surveyed	As % of Enrollment	No. Surveyed	As % of Enrollment
1	--	---	185	20.9	107	17.7	113	22.1
2	--	---	166	24.6	154	21.4	220	33.5
3	13	10	12	12	7	8	19	22
4	--	---	72	16	76	20	68	23
5	45	11.8	47	15.4	56	22.6	45	25.9
6	--	---	47	32.4	22	16.3	20	16.1
7	4	8.2	10	22.2	13	21.7	33	18.5
8	--	---	300	25	191	24	183	33.8
9	--	---	137	29	125	24	128	29
10	--	---	133	18	121	17	158	29
11	--	---	145	19	122	16	168	25
12	6	7.7	136	18.6	112	15.3	140	23.3
13	--	---	114	16	86	12.1	126	20
14	16	6	41	27.9	22	18.6	7	11.3
15	--	---	88	17.1	123	22.5	94	18.6
16	11	61	117	14.5	117	22.5	145	31
17	30	22	135	29.2	116	23.7	113	37.3
18	54	13.3	138	38.7	62	22.1	109	40.5
19	--	---	186	26.5	108	16.2	148	21.8
20	--	---	85	13	102	22	128	29
21	--	---	246	31.5	200	25.9	186	28.2
22	68	14.4	59	11.5	57	13.2	57	17.8
23	--	---	190	27	143	21	151	24
24	--	---	56	12	76	17	66	17
25	--	---	134	33	103	20	125	28
26	--	---	49	9.3	52	11.4	46	13
Total	247		3028		2473		2796	

TABLE 3

STUDENTS FAILING TEST

SCHOOL	# STUDENTS SURVEYED	% STUDENTS FAILING TEST
1	409	83
2	540	74
3	51	82
4	216	80
5	193	84
6	89	83
7	60	85
8	674	80
9	390	79
10	412	84
11	439	88
12	394	83
13	326	74
14	86	81
15	305	83
16	390	81
17	394	82
18	364	79
19	446	75
20	315	92
21	633	71
22	241	85
23	484	67
24	198	81
25	362	87
26	147	82
27	110	75
28	125	46
	8793	

TABLE 4

MEDIAN SCORES OF TOTAL SURVEY COMPARED TO MEDIAN SCORES GROUPED BY BUSINESS COURSE TRAINING

SCHOOL	TOTAL TEST	NO. BUS. COURSES	2+ BUS. COURSES
1	57	56	53
2	60	58	63
3	59	55	60
4	59	56	62
5	56	55	60
6	56	61	54
7	57	56	57
8	59	58	60
9	58	58	62
10	58	59	57
11	57	57	57
12	58	58	58
13	62	61	63
14	58	56	57
15	58	57	59
16	58	57	59
17	57	56	62
18	58	57	65
19	60	60	66
20	53	52	59
21	61	61	64
22	54	55	63
23	62	61	63
24	58	58	61
25	56	58	57
26	59	59	51
27	59	59	63
28	66	64	67

TABLE 5

MEDIAN SCORES BY GRADE LEVEL

SCHOOL	GRADE 9	GRADE 10	GRADE 11	GRADE 12	COMM. COLLEGE
1	--	54	59	59	
2	--	58	59	62	
3	55	60	58	61	
4	--	51	58	61	
5	51	55	58	59	
6	--	60	57	59	
7	56	52	58	57	
8	--	58	59	60	
9	--	57	60	59	
10	--	56	58	59	
11	--	56	57	57	
12	53	57	55	59	
13	--	59	62	63	
14	56	60	57	62	
15	--	57	55	62	
16	54	56	58	59	
17	53	56	56	60	
18	55	58	60	61	
19	--	59	57	61	
20	--	53	50	55	
21	--	58	64	64	
22	58	54	59	59	
23	--	59	62	64	
24	--	58	57	59	
25	--	57	54	56	
26	--	56	60	58	
28	--	--	--	--	66

TABLE 6

MEDIAN SCORES ON THE TOTAL SURVEY AND IN THE SKILL AREAS

School	Total Test	Legal Skills	Recrdkping Skills	Buying Skills	Mgmt Skills
1	57	53	59	67	50
2	60	54	61	78	52
3	59	55	58	71	54
4	59	57	59	70	54
5	56	53	60	67	51
6	56	53	59	70	50
7	57	55	60	65	52
8	59	55	60	71	54
9	58	55	60	69	55
10	58	56	56	67	53
11	57	55	56	60	49
12	58	45	59	73	49
13	62	55	64	76	54
14	58	56	57	68	59
15	58	54	58	68	50
16	58	54	61	70	52
17	57	54	59	68	45
18	58	53	61	72	50
19	60	54	63	75	54
20	53	52	53	62	40
21	61	56	68	77	57
22	54	53	57	65	57
23	62	56	63	76	59
24	58	55	56	67	57
25	56	56	55	61	52
26	59	56	49	66	65
27	59	50	63	68	49
28	66	58	73	81	67

TABLE 7

MEDIAN SCORES IN THE LEGAL SKILLS AREA - PART I

RANGE OF SCORES ON LEGAL SKILLS

45 - 57 (55-MODE)

RANGE OF SCORES ON LEGAL SKILLS OF STUDENTS WHO HAD NO BUSINESS COURSES

52 - 56 (54-MODE)

RANGE OF SCORES ON LEGAL SKILLS OF STUDENTS WHO HAD TWO OR MORE BUSINESS COURSES

45 - 60 (56-MODE)

RANGE OF SCORES ON LEGAL SKILLS OF STUDENTS WHO HAD BUSINESS LAW

45 - 60 (59-MODE)

RANGE OF SCORES ON LEGAL SKILLS OF STUDENTS WHO HAD CONSUMER EDUCATION

42 - 63 (56-MODE)

TABLE 8

MEDIAN SCORES IN THE RECORDKEEPING SKILLS AREA - PART II

RANCE OF SCORES ON RECORDKEEPING SKILLS

53 - 73 (59-MODE)

RANGE OF SCORES ON RECORDKEEPING SKILLS OF STUDENTS WHO HAD NO BUSINESS COURSES

54 - 71 (59-MODE)

RANGE OF SCORES ON RECORDKEEPING SKILLS OF STUDENTS WHO HAD TWO OR MORE BUSINESS COURSES

46 - 75 (57-MODE)

RANGE OF SCORES ON RECORDKEEPING SKILLS OF STUDENTS WHO HAD BOOKKEEPING

45 - 68 (56,65-MODE)

RANGE OF SCORES ON RECORDKEEPING SKILLS OF STUDENTS WHO HAD BUSINESS MATH

54 - 80 (57-MODE)

TABLE 9

MEDIAN SCORES IN THE BUYING SKILLS AREA - PART III

RANGE OF SCORES ON BUYING SKILLS

60 - 81 (67,76-MODE)

RANGE OF SCORES ON BUYING SKILLS OF STUDENTS WHO HAD NO BUSINESS COURSES

62 - 87 (65-MODE)

RANGE OF SCORES ON BUYING SKILLS OF STUDENTS WHO HAD TWO OR MORE BUSINESS COURSES

60 - 84 (63,78-MODE)

RANGE OF SCORES ON BUYING SKILLS OF STUDENTS WHO HAD CONSUMER EDUCATION

57 - 87 (62,77-MODE)

RANGE OF SCORES ON BUYING SKILLS OF STUDENTS WHO HAD GENERAL BUSINESS

58 - 87 (68-MODE)

TABLE 10

MEDIAN SCORES IN THE MANAGEMENT SKILLS AREA - PART IV

RANGE OF SCORES ON MANAGEMENT SKILLS

40 - 67 (50,54-MODE)

RANGE OF SCORES ON MANAGEMENT SKILLS OF STUDENTS WHO HAD NO BUSINESS COURSES

43 - 63 (55-MODE)

RANGE OF SCORES ON MANAGEMENT SKILLS OF STUDENTS WHO HAD TWO OR MORE BUSINESS COURSES

42 - 70 (50,60-MODE)

RANGE OF SCORES ON MANAGEMENT SKILLS OF STUDENTS WHO HAD CONSUMER EDUCATION

40 - 70 (49,60-MODE)

RANGE OF SCORES ON MANAGEMENT SKILLS OF STUDENTS WHO HAD BOOKKEEPING AND BUSINESS LAW

25 - 80 (57-MODE)